

Effect of Yoga on Physical Education

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Abstract:

This study aimed to examine the effects of yoga on attention control (AC) and mood states in graduate students with high and low sensory processing sensitivity (SPS) in a physical education course setting. Motor skill intervention programs in childhood have been effective in providing participants benefits on motor, affective, and social development. Recognizing the benefits of yoga' practice to promote overall health, in recent years, yoga programs for children have been implemented in several countries and recently also in Brazil. Although yoga is an ancient practice that seeks a balance between the body, mind and emotions and the literature highlight its benefits on the motor, physical, cognitive, and social aspects, its effectiveness on child development is scarce. Yoga programs have gain popularity; however, there is a lack of studies in this field, especially involving school-age children. Furthermore, studies are very restricted and focus on the analysis of few aspects of participants' improvements.

Keywords:

Introduction:

The yoga program was implemented in the physical education classes during 12 weeks, twice a week for 45 min each lesson. Since the public school has no gym or other safety space, the lessons were implemented in the children classroom. A student-centered approach of teaching was implemented. Appropriated practices were provided with a yoga movement curriculum with scope and sequence based on children the initial level of performance in order enhances cognitive, social, and motor development. The teacher used direct and indirect learning strategies, encouraging children do modeled movements, and to discovery the different ways to move. The instruction was meaningful and adequate to the children level of understanding, using simple words, and cue word to perform the yoga postures. The teacher also encourages the self-expression throughout the movement and equally encourages boys and girls as well the child with disability to achieve success and cooperate with each other. Different skill levels of yoga tasks were presented in each session that encompassed group diversity of skills levels. The teacher strategies also supported the autonomy of children,

personal and group achievements, and the active participation in decision-making during the learning process.

Teacher also employed a strategy of “gymnastics storied” in which yoga postures were practiced in accordance with different children's books. Stretching and massage in pairs, meditation, and relaxation as well as games and music related to the practice of yoga were also implemented. In addition, the classes emphasized the breathing awareness and the adoption of basic values of social interaction, nonviolence, truthfulness, respect with themselves and the others, and cooperation.

Mental health issues among graduate students are a global problem. A previous study revealed that approximately 41% of graduate students experienced moderate to severe anxiety symptoms and 39% had moderate to severe depressive symptoms (Evans et al., [2018](#)). In addition, a survey of 300 graduate students indicated that they suffered from anxiety, depression, nervousness, stress, loneliness, and weight issues, potentially leading to high rates of suicidal ideation and suicide attempts (Garcia-Williams et al., [2014](#)). Mental health issues are a concern in both Western and Eastern countries (Sasaki et al., [2015](#)); thus, examining effective stress management methods is critical to alleviate mental health issues among graduate students worldwide.

The most important benefit of yoga is physical and mental therapy. Indians have given great importance to „yoga“ and „physical exercises“ not only to prevent or cure the physical ailments/diseases but to keep fit also. The great ancient Rishis, Vedas and Purans also have given much importance to physical fitness (Uppal&Gautam, 2006). Traditionally lord Shiva is regarded as the Original founder of yoga. It is believed that this secret divine Science of life, revealed to enlightened sages in meditation, was firstly narrated by lord Shiva to his wife Parvati for “Upliftment of humanity”. Hiranyagarbha has been proclaimed as the very first teacher of yoga. Yoga is an ancient science of physical, mental and spiritual development. Yoga has become increasingly popular in Western cultures as a means of exercise and fitness training. Yoga is ultimate for developing harmony among body, mind and spirit. Yoga asana are ways of moving and/or holding the body in different position. Yoga asana has several exercises or postures that work wonders on fitness and health. Varying widely in application and style, these exercises (postures) gently stretch and explore all parts of body. Yoga asana boost physical strength, stamina and flexibility, improve blood circulation, enhance posture

and muscle tone and bestow greater powers of concentration and self-control. Through the practice of yoga, we become aware of the connection between our emotional, mental and physical levels. On the other hand pranayama is one of the five principles of Yoga or breathing and exercise which promote proper breathing. The ultimate goal of yoga is to make it possible for you to be able to fuse together the gross material (annamaya), physical (pranamaya), mental (manomaya), intellectual (vijnanamaya) and spiritual (anandamaya) levels within your being. In a Yogic point of view, proper breathing is to bring more oxygen to the blood and to the brain, and to control Prana or the vital life energy. The union of these two Yogic Principles is considered as the highest form of purification and self-discipline, covering both mind and body.

Objectives:

To find out the effect of yoga on selected physical & physiological variables of physical education students.

Data Analysis and Findings:

Table 1 shows the comparison of means of selected physical variables of pre test scores. In pull-ups mean value of pre- test is 12.2 and post- test is 13.38. In bent-knee sit ups mean value of pre- test is 38.42 and post- test is 43.31. In shuttle-run mean value of pre- test is 10.46 and post- test is 10.32. In standing broad jump mean value of pre -test is 224.36 and post- test is 229.7. In 50 yards dash mean value of pre- test is 7.19 and post- test is 7.01. In 12 min. run & walk mean value of pre- test is 2578.4 and post- test is 2648.2. In flexibility value of pre- test is 17.23 and post- test is 24.54.

There is significant difference found between the means of selected physical variables (Muscular strength & endurance of trunk; and flexibility) of physical education students, as „t“ value required to be significant is 2.021 and calculated value is more compare to tabulated value. Raub (2002), reported after his study that Yoga can improve strength and flexibility. Ray et al. (2001), also reported that shoulders, hip, trunk and neck flexibility improved due to yogic exercises. Cowen & Adams (2005) also reported significant improvements in upper body and trunk between the means of selected physical variables (Muscular strength(dynamic) & muscular endurance of arm & shoulders; Speed and agility; Explosive strength of leg; Speed of lower extremities & explosive strength; Cardio-vascular endurance)

of physical education students, as „t“ value required to be significant is 1.98 and calculated value is less compare to tabulated value.

Table 2 shows the comparison of means of selected physical variable of pre- test & post test scores. In pulse rate mean value of pre- test is 72.47 and post- test is 69.03. In vital capacity mean value of pre -test is 2998.56 and post- test is 3221.24. In pack flow rate mean value of pre- test is 462.84 and post- test is 496.03.

There is significant difference found between the means of all selected physiological variables (pulse rate, vital capacity & peak flow rate) of physical education students. Raub, (2002) reported to that Yoga may help control such physiological variables as blood pressure, respiration and heart rate, metabolic rate to improve overall exercise capacity. Harinath, (2004) also reported that yogic practices for 3 months resulted in an improvement in cardio-respiratory performance. Joshi (1992) also reported that six weeks courses in „pranayama“ improve ventilatory function in the form of lowered respiratory rate, and increases in the forced vital capacity , forced expiratory volume , maximum voluntary ventilation , peak expiratory flow rate , and prolongation of breath holding time. Yadav and Das (2001) also reported significant increase in forced vital capacity, forced expiratory volume and peak expiratory flow rate and the end of 12 weeks yoga training.

Conclusion:

Twelve weeks Yoga training is beneficial for improvement in Muscular strength & endurance of trunk & flexibility of physical education students. ♣ Twelve weeks Yoga training significantly improved pulse rate, vital capacity & peak flow rate of physical education students. ♣ Twelve weeks Yoga training is not beneficial for improvement of Muscular strength(dynamic) & endurance of arm & shoulder; Speed and agility; Explosive strength of legs; Speed of lower extremities & explosive strength; Cardio-vascular endurance of physical education students.

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